NOAA's Coastal Assessment and Data Synthesis System

Classified Shellfish Growing/Harvest Areas (1995)

Dataset Description

The 1995 National Shellfish Growing/Harvest Areas Digital Geography is a digital spatial framework developed using Geographic Information System (GIS) technology. It is derived from the 1995 National Shellfish Register and provides the details of Harvest Classification, Pollution Source Type, Restoration Activities, Classification Upgrade Potential, and Individual Species Abundance.

All files obtained are geo-referenced to NOAA's Coastal Assessment Framework (CAF). The data are available for one distinct spatial aggregation as outlined below. To view the data dictionary refer to NOAA's Coastal Assessment and Data Synthesis System (http://coastalgeospatial.nos.noaa.gov).

1) Coastal Watersheds (from NOAA's Coastal Assessment Framework),

Source(s) of Information

1995 National Shellfish Register
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Abstract

Information was collected on the status of 4,230 individual shellfish-growing areas, located in 122 estuarine and 98 estuarine areas in 21 coastal states. This information included: name of the growing area, location, spatial extent, classification and relative abundance, and in cases where there is a harvest-limited classification, the basis for the classification, the pollution sources contributing to the classification and their relative importance, a rating of the possibility of upgrading the classification, and any ongoing restoration efforts occurring at the site. The information on location includes the state, the number of the NOAA nautical chart on which the location appears, and the spatial extent as shown on the nautical chart. Once digitized into a geographic information system (GIS), each area's size was calculated. Six classifications were recorded in the *Register*. Note that in this report, "harvest-limited" refers to the sum of shellfish-growing waters that are classified as conditionally approved, restricted, conditionally restricted, or prohibited. All of the classifications used in the *Register* are defined in the *NSSP Manual of Operations* except for the unclassified designation that in past *Registers* was called "non-shellfish non-productive" (NSNP). The term NSNP was changed to "unclassified" in this updated *Register be*cause, while these areas are not actively surveyed and managed by the state at this time, they may contain productive shellfish resources.

It should be noted that areas classified as harvest-limited do not necessarily have a water quality problem. Some areas meet the water quality standards but are required to be closed by the *NSSP Manual of Operations* because the requisite sanitary surveys have not been conducted, or because of their proximity to various potential sources of pollution. Such areas exist, for example, around industrial outfalls, waste-water treatment plant outfalls and marinas. Furthermore, the classification of an area does not provide any indication of productivity. Past versions of the *Register* did not include an explanation for harvest-limited classifications. In an attempt to clarify this issue, the *1995 Register* includes the basis for harvest limitation,

with the possibilities including any combination of the following: administrative decision; conservation mea-sure; water quality; and/or the lack of a complete and up-to-date sanitary survey.

Growing Water Classifications

Approved Waters - Growing waters from which shellfish may non-be harvested for direct marketing. Fecal coliform median or geometric mean most probable number (MPN) does not exceed 14 per 100 ml, and not more than 10 percent of the samples exceed an MPN of 43 per 100 ml for a 5-tube decimal dilution test.

Conditionally Approved Waters - Growing waters meeting approved classification standards under predictable conditions. These waters are open to harvest when water quality standards are met, and are closed at other times. Fecal coliform standards are the same as for Approved (see above).

Restricted Waters - Growing waters from which shellfish may be harvested only if they are relayed or depurated before direct marketing. Fecal coliform median or geometric mean MPN does not exceed 88 per 100 ml, and not more than 10 percent of the samples exceed an MPN of 260 per 100 ml for a 5-tube decimal dilution test.

Conditionally Restricted - Growing waters do not meet the criteria for restricted waters if subjected to intermittent micro-biological pollution, but may be harvested if shellfish are subjected to a suitable purification process. Fecal coliform standards same as for Restricted (see above).

Prohibited Waters - Growing waters from which shellfish may not be harvested for marketing under any conditions.

Unclassified Waters - Growing waters that are part of a state's shellfish program but are inactive, i.e., there is no harvesting, and the state does not conduct any water quality monitoring or maintain a sanitary survey.

Sources of Pollution

State shellfish management personnel were asked to identify sources of pollution affecting harvest-limited shellfish-growing waters. Data were collected on 12 different pollution sources (the same suite of pollution sources collected for the *1990 Register*, plus marinas and agricultural feed-lots) that are grouped into three categories: point; nonpoint; and upstream sources. State shellfish managers were asked to identify the pollution sources as either *actual* or *potential contributors*. An *actual contributor* is defined as a pollution source the state shellfish manager knows is discharging to the area, whereas a *potential contributor* is defined as a source that could affect water quality under certain circumstances. For the actual contributors in each area, the shellfish manager was asked to rate the contributor's relative importance as high, medium or low. In those cases in which the shellfish manager could not specifically identify the "more important" pollution source(s), the pollutant was determined to be "actual but not rated." For detailed information on contributing pollution sources by shellfish-growing area, see Appendix III of he 1995 National Shellfish Register.

The data also contains information on the potential for an upgrade in classification. The state shellfish management personnel were asked to rate each area as high, medium, or low, given their knowledge of existing and potential sources of pollution. Additionally, data was collected to determine if any ongoing restoration activities are occurring within the particular area.

Relative Abundance

Information on the relative abundance of molluscan shellfish species was also collected. State shellfish management personnel rated the abundance of each species as high, medium, low, or none relative to that species' abundance throughout their state. Thus, the abundance data are most useful when they are used to compare areas within a state. For detailed information on relative abundance by shellfish-growing area, see Appendix III of the 1995 National Shellfish Register.

Data Processing

State Visits

Each state has a Shellfish Sanitation Program responsible for classifying shellfish-growing waters. The data compiled for the 1995 National Shellfish Register were obtained through extensive on-site interviews with personnel from these programs. Information including location, spatial extent, harvest classification, reason for harvest restriction, and pollution sources was recorded on standardized forms. Most states also have a resource management agency that performs resource enhancement and/or restoration activities. This agency typically provided the relative abundance data and information pertaining to ongoing restoration activities.

GIS Mapping and Data Entry

During the state visits, the location and spatial extent of each shellfish-growing area was recorded on clear mylar media overlaid on NOAA nautical charts. The scale of the NOAA charts varied from 1:50,000 to 1:232,000 with the majority being 1:80,000. Some 235 charts were used to record data for 21 states. The areas drawn on the mylars were then digitized into an ArcInfo® geographic information system (GIS). Shellfish-growing water name, classification, and unique ID were entered in the GIS files. The area for each growing area was calculated through the GIS. In addition to the GIS mapping, all related data on pollution sources, relative abundance, etc., were entered into a spreadsheet application and associated to each spatial area. Once the GIS digitizing and data entry were completed, quality assurance and quality control tasks were performed.

Quality Control

State Verification

Complete sets of shellfish-growing water maps and data sheets were provided to each state for final verification. Files were finalized following state review of this information.

Data Quality

The *Register* data are a synthesis of the information and knowledge accumulated on a daily basis by state shellfish management personnel. Therefore, the quality of data presented is directly related to the resources available to conduct shellfish management responsibilities. Since state re-sources vary, the availability and detail of shellfish-related information also varied.

Contact(s) on Data Processing

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Applicable Digital Geography

The data are associated to distinct spatial aggregations. Geographic Information System (GIS) digital geographies are available for associating these data to their appropriate spatial aggregations. The following GIS files apply to and should be used with these data during GIS processing.

Coastal Watersheds
Classified Shellfish Areas

To download the data or an applicable digital geography, visit:
http://coastalgeospatial.nos.noaa.gov/data_gis.html.

For Additional Information:

For additional information, refer to NOAA's Coastal Assessment and Data Synthesis (CA&DS) System, or contact:

The CA&DS team.
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